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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,329	10/12/2001	Lilla Boroczky	US 010004	9217
24737	7590	08/26/2005	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			KOSTAK, VICTOR R	
			ART UNIT	PAPER NUMBER
			2614	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/976,329

Applicant(s)

BOROCZKY ET AL.

Examiner

Victor R. Kostak

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 7-11, 17-19 and 23-25 is/are rejected.  
7) ☒ Claim(s) 4-6, 12-14 and 20-22 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

Art Unit: 2614

1. Upon review of the application, it is noted that the phrase “*capable of ...*” (recited in plural occurrences in each of claims 1-3, 9-11, 18 and 19) means that the device does not actually require *performance* of the stated function. The phrase only alleges ability or possibility, but not an actual carrying out of a function. (See *In re Swinehart*, 169 USPQ 226 (CCPA 1971; *In re Schreiber*, 44 USPQ2d 1429 (Fed Cir. 1997; *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The examiner regrets not bringing this to applicant’s attention earlier in prosecution.

In view of this, the following art rejections are presented.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 9, 10, 11, 15, 17-19, 23 and 25 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Fogg (of record) in view of Shen et al.

Reviewing Fogg (noting particularly Figs. 4, 6 and 11-13), he enhances the image quality of an initially encoded video signal based on digital processing, by incorporating a useful metric processor (component 622 in Fig. 6) which determines the useable amount of enhancement that can be applied to the initially encoded video signal without enhancing coding artifacts (e.g. col. 3 lines 35-61; col. 4 lines 38-41; col. 12 line 63 – col. 13 line 3 and lines 31-35; col. 19 lines 10-16).

Applicant is reminded that identification of an “amount” of enhancement is not exactly a quantified or quantifiable measure but in practical degrees. Application of enhancement is done more so in relative levels, wherein the visual perception of imagery is enhanced in degrees rather than in quantified units. With this in mind, Fogg does determine the extent of enhancement that can be used, as he determines the “*most effective* applications of enhancement processing *and/or* to avoid the creation of artifacts as a result of enhancement processing” (col. 13 lines 33-35). The “most effective” applications of the enhancement processing correspond to the amount of enhancement processing.

Secondly, knowledge of the optical pathway is only part of the decision-making. In col. 13 lines 16-19 and lines 31-35, Fogg points out that existing artifacts that are to be corrected (i.e. the enhancement thereof resulting from the enhancement of the image data being kept to a minimum) are a result of *encoding* (col. 13 lines 32-33). Block edges are inherent in block coding (a basic stage in MPEG coding) and qualify as noise because they are not image data. However, they only qualify as artifacts when they are perceivable. When image enhancement is applied to MPEG coded data, as disclosed by Fogg, the block edges become more noticeable or enhanced. Fogg counters that artifact enhancement by determining plural and varied metrics (noting again col. 4 lines 38-41; col. 12 line 63 – col. 13 line 3 and lines 31-35; col. 19 lines 10-16 cited previously, and in addition col. 17 lines 1-7 and col. 19 lines 1-9). The metrics all involve coding information. Such information is not limited to coding parameters such as quantization steps, macroblock types or forward motion vectors. Coding information is information involving some stage used in a coding process.

Art Unit: 2614

Continuing, since applicant recites the capability of performing a function by the metric generator, and the capability of performing a function by the gain control block (rather than actually performing the stated functions), one of ordinary skill in the art can very reasonably presume that the metric generator of Fogg is also capable of performing that function, if so enabled. Likewise his enhancement unit (i.e. coding gain control block) would be capable of using the metric data if so enabled.

Conversely, nothing in Fogg suggests an incapability of his elements from performing the respective functions. It would have been obvious to use an adaptive peaking circuit as disclosed by Shen (element 190 in Fig. 1A) who also analyzes DCT data for the purpose of enhancing yet not increasing noise of an encoded signal stream, by using his adaptive peaking circuit. It is emphasized that Fogg's system is capable of carrying out applicant's claimed functions as well if so fashioned for that purpose, thereby meeting claims 1, 9 and 17.

As for claims 3, 11 and 19, sharpness (detail or edge) enhancement is performed by Shen (e.g. col. 2 lines 55-59), which would have been obvious to incorporate in Fogg for that specific benefit (and since that function is not actually required to be carried out).

As for claims 2, 10 and 18, enhancer 303 can include a sharpening kernel (col. 8 line 64 – col. 9 line 1 describing prior art system), wherein Fogg discloses edge enhancing (e.g. Fig. 12c) that accordingly generates gain data based on plural various metrics.

As for claims 7, 15 and 23, coded data is used to determine the metrics (col. 12 line 59 – col. 13 line 3).

Regarding new claim 25, one of the metrics used by Fogg is motion vectors, discussed previously, (which could be forward or backward in MPEG coding).

3. Claims 1, 8, 9, 16, 17 and 24 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Mancuso et al. (of record) in view of Shen et al.

Reviewing Mancuso, he also enhances the image quality of an initially encoded video signal based on digital processing, by incorporating a useful metric processor (component 104 in Fig. 1) which determines the useable amount of enhancement that can be applied to the initially encoded video signal without enhancing coding artifacts (e.g. col. 1 lines 55-58; col. 3 lines 24-28).

Applicant is reminded that the Sobel operators qualify as coding information because the operators provide information used in the coding process. "Coding information" is not restricted to MPEG parameters such as quantization steps, or macroblock types, or motion vectors.

Repeated from above, since applicant recites the capability of performing a function by the metric generator, and the capability of performing a function by the gain control block (rather than actually performing the stated functions), one of ordinary skill in the art can very reasonably presume that the metric generator of Mancuso is also capable of performing its function, if so enabled. Likewise his enhancement unit (i.e. coding gain control block) would be capable of using the metric data if so enabled.

Conversely, nothing in Mancuso suggests an incapability of his elements from performing the respective functions. It would have been obvious to use an adaptive peaking circuit as disclosed by Shen (element 190 in Fig. 1A) who also analyzes DCT data for the purpose of enhancing yet not increasing noise of an encoded signal stream, by using his adaptive

Art Unit: 2614

peaking circuit. It is emphasized that Mancuso's system is capable of carrying out applicant's claimed functions as well if so fashioned to. Claims 1, 9 and 17 are accordingly rejected.

As for claims 8, 16 and 24, the metrics involves coding data as well as content data (i.e. image attributes of various types as specified in col. 3 lines 22-24).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is (571) 272-7348.

The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

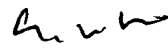
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P.O. Box 1450  
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Art Unit: 2614

**Or faxed to:**

**(571) 273-8300**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak  
Primary Examiner  
Art Unit 2614

VRK